

SNAKES OF MISSOURI

MISSOURI DEPARTMENT OF CONSERVATION

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Red Milk Snake

Garter Snake eating a leopard frog



SNAKES have generated more fear and misunderstanding than any other group of animals. And psychologists have proven that a fear of snakes is acquired; we are not born with it. Once people learn some of the interesting facts about snakes and discover that most of them are harmless and beneficial, their aversion may diminish. With patience and understanding, almost anyone can overcome a dread of snakes and actually enjoy studying them. One thing is certain—even people with a well-developed fear of snakes are curious about them.

Missouri, with its wide variety of wildlife habitats—prairies, Ozark hills and valleys, swamps, marshes—has a total of 52 species and subspecies of snakes. (A subspecies is a geographic race of a species.) Most of our snakes are harmless. Although many may bite in self-defense, their bite usually produces nothing more than harmless scratches. There are only five species of venomous snakes in all of Missouri and we describe them in a separate section of this pamphlet.

Snakes are members of the Class Reptilia, a group that also includes turtles, alligators, crocodiles and lizards. Snakes and lizards are similar in many ways, but there are some important differences. A clear, non-movable scale covers the eyes of all snakes, whereas most lizards have movable eyelids. Most lizards have legs, but some are legless. The slender glass lizard, which lives in the southern half of Missouri, is an example; it looks like a snake because it has no legs, but like all our lizards, the slender glass lizard has movable eyelids and external ear openings, both of which are lacking in snakes. In addition, lizards have a pair of lungs, while most snakes have an elongated right lung and either no left lung or only a rudimentary one.



Although snakes are legless, they are able to move about with ease. A snake's backbone has from 200 to 400 vertebrae, depending on the species, which permits extreme flexibility. Snakes move forward by a side-to-side movement, or in a straight line by literally walking on their ribs. All snakes can swim.

Snakes must swallow their food whole, and some can engulf animals three times the diameter of the snake's head. The lower jaws of snakes are loosely joined to the skull and the upper jaws are movable. A snake grasps its prey (fish, frog, mouse) by the head and engulfs it by advancing first one side of the jaw and then the other. The snake's teeth also help it swallow. The teeth are sharp and curve toward the rear of the mouth. They hold the prey and prevent its escape. Some snakes, such as water snakes and garter snakes, eat their prey alive, while venomous snakes usually inject venom into the animal and swallow it after it is dead. Several Missouri snakes, such as the rat snakes, kingsnakes, milksnakes and bullsnakes, kill by constriction. The snake grasps the prey in its mouth and immediately wraps several tight coils around it. Thus prevented from breathing, it dies from a lack of oxygen. Then the snake swallows its prey.

The snake's long, forked, extendable tongue is often thought to be dangerous; in fact, it is completely harmless. Snakes and lizards use their tongues to pick up odors that are transferred to special sense organs in the roof of the mouth.

The food habits of Missouri's snakes are as varied as the types of snakes we have. Some, such as the rough green snake, eat insects and insect larvae. Others, like the water snakes, eat fish, frogs, tadpoles or crayfish. The black rat snake and bullsnake eat rodents and small birds and their eggs. Kingsnakes also eat rodents and are important predators on lizards and other snakes, including venomous snakes.

All snakes shed their outer layer of skin periodically as they grow. Young ones usually shed once every four or five weeks during warm months, whereas adults may shed once every six or eight weeks during their active

Rough Green Snake hatching



Diamondback Water Snakes being born

season. In the case of rattlesnakes, a new segment is added at the base of the rattle at each shedding. In Missouri, rattlesnakes may shed from two to five times a year. As the rattle becomes longer, the old segments weaken and may break off, so it is not possible to determine the age of a rattlesnake by counting the segments in the rattle.

In Missouri, snakes normally breed in the spring, soon after they emerge from winter dormancy. Studies show, however, that a few species may breed in the fall. About half of Missouri's snake species lay eggs; the rest give birth to fully developed young.

Some egg-laying species are black rat snakes, bullsnakes, kingsnakes, racers, worm snakes, ringnecks and rough green snakes. The size of the egg depends on the species; the number of eggs produced depends on the size of the female. The larger the female, the more eggs she can produce. Snake eggs are elongated and have a tough, leathery shell. Females select rotten logs or stumps, leaf litter or sawdust piles in which to deposit their eggs. As a young snake develops within the egg, a small "egg tooth" grows on the tip of its snout; the snake uses this "tooth" to slit the shell when hatching. Afterwards, the "tooth" is shed. Snakes usually hatch in late summer or early fall.

Snakes which retain their young until they are completely developed are water snakes, garter snakes, brown snakes, copperheads, cottonmouths and rattlesnakes. This form of reproduction is slightly advanced over egg-layers. The young snakes are retained and protected inside the female during their development. Each young snake is protected inside a thin, sac-like membrane containing yolk for nourishment. Some of the young snakes break through the membrane while inside the female and emerge from the female in a tight coil; others break through after being born. Snakes that develop inside the female are normally born in mid to late summer.

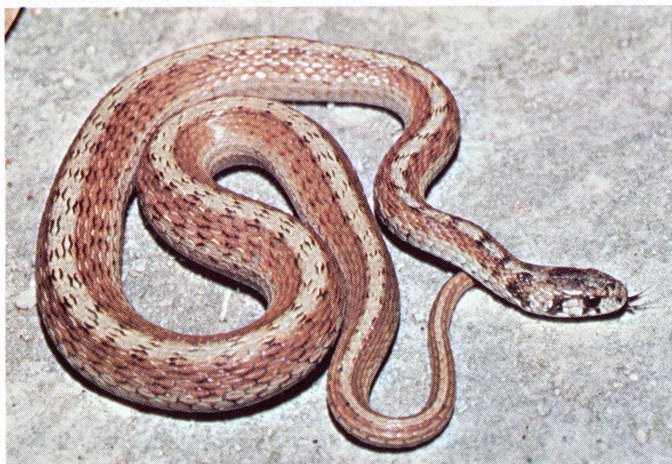
The smallest snake native to Missouri is the flathead snake (*Tantilla gracilis*), which averages from 7 to 8 inches (18-20 cm) long. The largest is the bullsnake (*Pituophis melanoleucus sayi*), which averages from 50 to 72 inches (127-183 cm).

MISSOURI'S

COMMON HARMLESS SNAKES

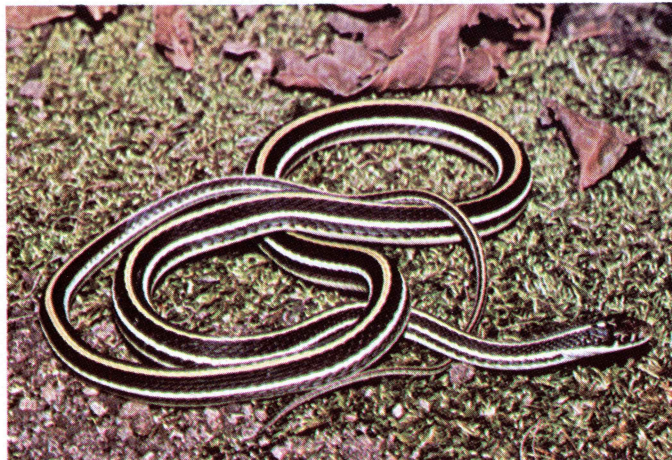


Northern Redbelly Snake



Midland Brown Snake

Western Ribbon Snake



NORTHERN REDBELLY SNAKE

Storeria occipitomaculata occipitomaculata

This is one of our smallest snakes. General color is gray-brown or reddish-brown on top and bright red or orange below, and the redbelly snake usually has a light tan stripe down the back. It is 8 to 10 inches (20-25 cm) long. Redbelly snakes are secretive and normally live under rocks or logs in rocky or damp woods. Food includes earthworms, slugs and, occasionally, insects.

Missouri Distribution: Statewide, except for several northwestern counties.

MIDLAND BROWN SNAKE

Storeria dekayi wrightorum

The midland brown snake is a close relative of the redbelly snake. The general color is gray-brown to reddish-brown, with a white or yellowish belly. Its back has a distinct tan stripe bordered by two rows of small, dark brown spots; the spots normally are joined by small lines across the tan stripe. It is 9 to 13 inches (23-33 cm) long. This species prefers a moist environment and can be found under logs, boards or rocks near marshes, swamps, moist woods and, sometimes, rocky hillsides. Brown snakes eat earthworms, slugs and soft-bodied insects.

Missouri Distribution: Statewide, but hybridizes with the Texas brown snake in the western part of Missouri.

WESTERN RIBBON SNAKE

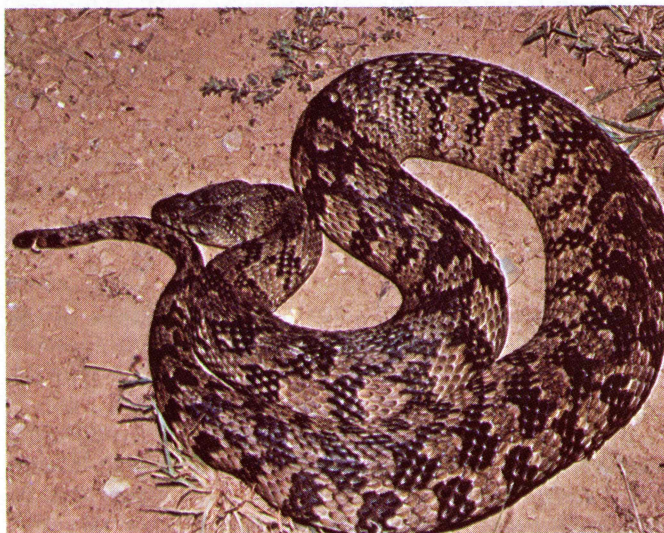
Thamnophis proximus proximus

This long, slender snake is a variety of garter snake. Two wide, black stripes border a yellow or orange stripe down its back, and often there is a yellow or orange spot on its head. The belly is greenish. Length ranges from 20 to 30 inches (51-76 cm). This species lives in wooded areas near water and may be seen along the banks of streams or the edges of ponds. Ribbon snakes eat small frogs and, sometimes, minnows.

Missouri Distribution: Statewide.



Eastern Garter Snake



Diamondback Water Snake



Smooth Earth Snake

EASTERN GARTER SNAKE

Thamnophis sirtalis sirtalis

Of the five kinds of garter snakes in Missouri, the eastern garter snake is the most common. Color is variable; it may be dark brown, greenish or olive, and normally there are three yellowish stripes—one on the back and one on each side. Dark areas between the light stripes may be spots instead of stripes. The skin between scales along the sides may be red or orange. The belly is usually yellowish-green with two indistinct rows of black spots. Length ranges from 18 to 26 inches (46-66 cm). Garter snakes often are found under boards, rocks or other objects in city lots, near farm buildings, in meadows or along streams. Like many kinds of harmless snakes, garter snakes will bite to defend themselves. They also will secrete a foul-smelling musk from glands at the base of the tail when first captured. Food consists of earthworms, frogs, toads, salamanders, minnows and even small mice.

Missouri Distribution: Occurs throughout the eastern half of the state. The red-sided garter snake—a subspecies—lives in the western half of Missouri.

DIAMONDBACK WATER SNAKE

Nerodia rhombifera rhombifera

Of the seven types of water snakes native to Missouri, the diamondback is the largest. The common name is derived from the light areas along the snake's back which may be shaped like diamonds. Overall color may be light brown or dull yellow, with dark brown markings on the sides and back. Two rows of dark brown half-moons border the yellow belly. Scales along the body have keels, which cause water snakes to feel rough. Length ranges from 30 to 48 inches (76-122 cm). Diamondbacks may live along slow-moving rivers but more commonly are seen along river sloughs, oxbow lakes and swamps. Water snakes bite viciously to defend themselves and also secrete a strong-smelling musk from glands at the base of the tail. Diamondback water snakes eat slow-moving or dead fish, frogs and toads.

Missouri Distribution: Absent from the Ozarks; common in southeastern corner and over northern and western Missouri. Does not occur in extreme northern counties.

SMOOTH EARTH SNAKE

Virginia valeriae

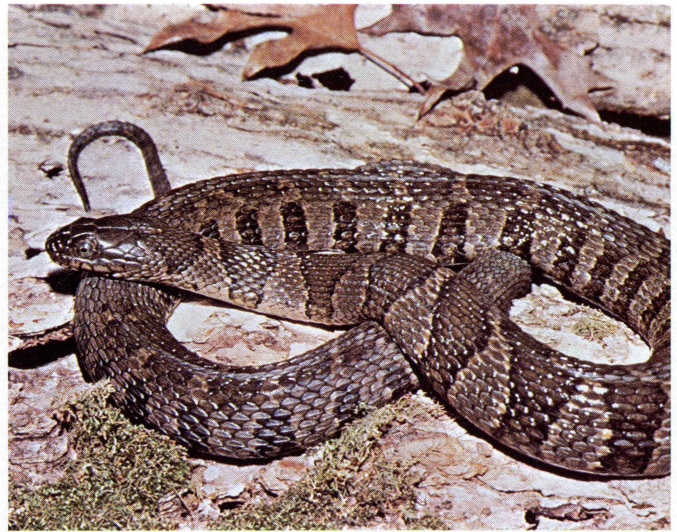
A small snake with a cone-shaped head, this snake generally is gray to light brown or reddish-brown. It has no distinct markings. The belly is plain white or cream-colored. Length ranges from 7 to 10 inches (18-25 cm). This nondescript little snake is a woodland species and usually remains hidden under rocks, logs or in leaf litter. It feeds chiefly on earthworms.

Missouri Distribution: Throughout the southern half of the state.

NORTHERN WATER SNAKE
Nerodia sipedon sipedon
Local Name: banded water snake

This is Missouri's most common species of water snake. A gray to reddish-brown snake with dark brown crossbands, its belly is cream-colored with numerous black and reddish half-moon markings. Scales along the back and sides are keeled. Length ranges from 24 to 42 inches (61-107 cm). Northern water snakes live in or near any aquatic habitat: ponds, lakes, sloughs, streams, rivers and marshes. Water snakes eat fish, frogs, tadpoles, toads and salamanders. Although water snakes will bite to defend themselves, their bite is harmless.

Missouri Distribution: Found throughout the northern two-thirds of the state. A subspecies, the midland water snake, lives in the southern third of the state.



Northern Water Snake

WESTERN WORM SNAKE
Carphophis amoenus vermis

This species is usually purplish-brown above and salmon pink on the belly and lower sides. The head is pointed and aids in burrowing. The tail has an interesting (and harmless) spike which also helps it maneuver through soil. Length ranges from 7½ to 11 inches (19-28 cm). This species is never seen in the open; it either hides under rocks, logs or boards, or burrows into damp soil or leaf litter. Worm snakes mainly live on wooded hillsides. They eat earthworms and insect larvae and eggs.

Missouri Distribution: Statewide, except for extreme southeastern corner and a few counties in the north-central part of the state.



Western Worm Snake

ROUGH GREEN SNAKE
Opheodrys aestivus

This is a long and slender snake often seen in the Ozarks. It is light green above and has a white or yellowish belly. Scales on the back have small ridges or keels. Length ranges from 22 to 32 inches (56-81 cm). This species is active by day and lives in bushes, vines and low-hanging branches of trees near streams or lakes. It is often overlooked because it blends so well with its surroundings. Food includes soft-bodied insects—especially grasshoppers, crickets and smooth caterpillars—and spiders.

Missouri Distribution: Throughout the southern half of the state.



Rough Green Snake



Western Mud Snake

WESTERN MUD SNAKE
Farancia abacura reinwardti
 Local Name: hoop snake

This is a shiny, iridescent snake of the southeastern swamps. It is shiny black on top and the belly is red, pink and orange with some black spots. The tail of most specimens ends in a sharp point, which is harmless. Length ranges from 40 to 54 inches (107-137 cm). This species lives in and near the large swamps in the southeastern corner of the state and can be seen in the water or hiding under logs or other objects in swamps. Mud snakes have specialized food habits; primarily, they eat one species of aquatic salamander called the three-toed amphiuma—a swamp-dwelling, eel-like species. The mud snake uses its pointed tail to help manipulate the long, slender amphiuma so the snake can swallow it more easily. Mud snakes also eat salamanders, tadpoles and fish. A myth associated with this species contends that it can place its tail in its mouth and roll downhill at high speed. We are not sure of the origin of this myth, but there is no scientific basis to it.

Missouri Distribution: Restricted to the southeastern corner of the state.



Eastern Hognose Snake

EASTERN HOGNOSE SNAKE
Heterodon platyrhinos

Local Names: spreadhead, puff adder, hissing viper

A snake with an upturned snout, the eastern hognose normally is gray-brown or tan with distinct dark brown markings down its back. Some individuals lack most of the spots, except for two large black spots behind the head. The belly is mottled with gray. Length averages from 20 to 33 inches (51-84 cm). Preferred habitat is sandy areas or open woods with loose soil. This harmless snake has the ability to hiss loudly and spread its neck like a cobra. If this defense fails to ward off an enemy, the snake may thrash around, open its mouth, roll over and play dead. Hognose snakes feed chiefly on toads but are also known to eat frogs or salamanders.

Missouri Distribution: Statewide.

Prairie Ringneck Snake



PRAIRIE RINGNECK SNAKE
Diadophis punctatus arnyi

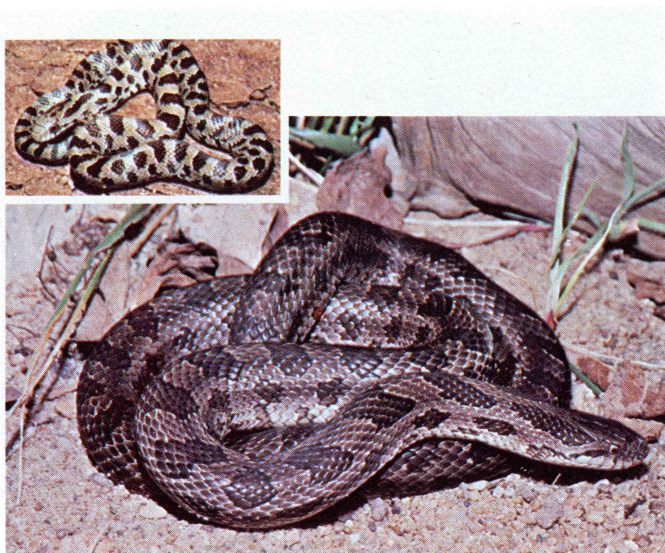
Ringneck snakes are easily recognizable by their small size, uniform dark color on the back, bright yellow-orange belly and distinct yellow ring around the neck. The back can be dark brown, gray or blue-black. The belly is yellow, changing to orange near the tail. The belly also has small, black spots which are irregular in size and pattern. Length ranges from 10 to 14 inches (25-36 cm). Ringnecks live on rocky, wooded hillsides. Ringneck snakes are secretive and not only take shelter under rocks but also find prey there—worms, slugs, soft-bodied insects and small salamanders.

Missouri Distribution: Statewide, but replaced by the Mississippi ringneck snake—a subspecies—in the southeastern corner.

PRAIRIE KINGSNAKE
Lampropeltis calligaster calligaster

This is a fairly common snake over most of the state. Overall color is tan, brownish-gray or greenish-gray. Numerous dark blotches down the back and sides are brown, reddish or greenish-brown. The belly is yellowish-tan covered by blocky, brown markings. Length averages from 30 to 42 inches (76-107 cm). The prairie kingsnake lives in prairies and open woods, as well as rocky, wooded hillsides. Kingsnakes are known for their ability to eat other snakes, including venomous species, and are immune to the venom of copperheads, cottonmouths and rattlesnakes. Other foods include lizards, small rodents and, occasionally, birds. Kingsnakes kill their prey by constriction. Young or newly hatched prairie kingsnakes often are confused with the venomous copperhead. Kingsnakes have round markings on their back (see inset) while copperheads have hourglass-shaped markings.

Missouri Distribution: Statewide.



Prairie Kingsnake juvenile (insert)

SPECKLED KINGSNAKE
Lampropeltis getulus holbrooki
Local Name: salt and pepper snake

This handsome snake is generally black. A white or yellow spot in the center of most of the scales causes it to look speckled. The belly is yellowish with some irregular, black markings. Length averages from 36 to 48 inches (91-122 cm). The speckled kingsnake can be found under rocks, logs or boards on rocky, wooded hillsides or near farm buildings. Like the rest of our kingsnakes, the speckled kingsnake vibrates its tail when alarmed. It feeds on lizards, snakes and small rodents.

Missouri Distribution: Statewide.

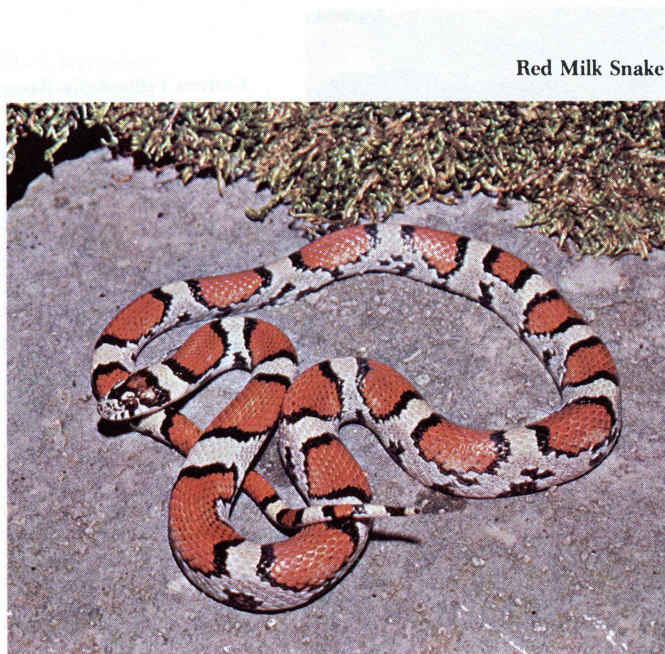


Speckled Kingsnake

RED MILK SNAKE
Lampropeltis triangulum sispila

This is one of Missouri's most beautifully colored snakes. General body color is white or light tan with red or orange markings bordered with black. The belly is white and strongly checked with black. Length ranges from 21 to 28 inches (53-71 cm). This species lives under rocks on wooded, rocky hillsides and cedar glades. The red milk snake often is misidentified as a coral snake, which is not found in Missouri. Coral snakes have red bands bordered by yellow. The red milk snake feeds on lizards, small snakes and small mice, killing its prey by constriction.

Missouri Distribution: Statewide.



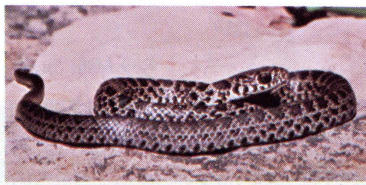
Red Milk Snake



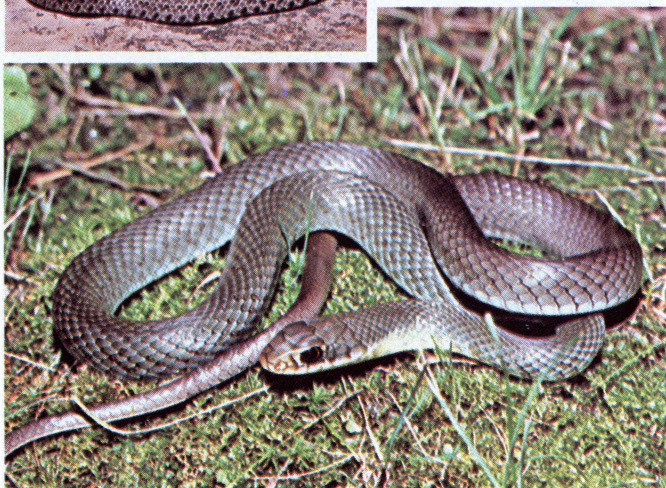
Eastern Coachwhip



Bullsnake



Eastern Yellowbelly Racer
juvenile (insert)



EASTERN COACHWHIP

Masticophis flagellum flagellum

This is one of our longest snakes. It is dark brown or black from the head back over half the length of the snake. The rest of the snake is tan or light brown. Some specimens in our area are totally black. Length averages from 42 to 60 inches (107-152 cm). The eastern coachwhip lives on rocky, wooded, south-facing hillsides, open woods and prairies. Because it is fast-moving and thrashes about when captured, some people believe coachwhips can whip a person to death. This is a myth. The coachwhip will bite to defend itself and may vibrate its tail when alarmed. Coachwhips eat mice, insects, lizards, small snakes and, occasionally, small birds.

Missouri Distribution: Southern half of the state except for the southeastern corner.

BULLSNAKE

Pituophis melanoleucus sayi

The bullsnake is Missouri's largest snake. It is tan or cream-colored with numerous, large, brown or black blotches. The tail may have light and dark bands. Often, a dark line angles from the eye down to the jaw. The belly is yellow or cream-colored, with dark brown or black spots along the sides. Length averages from 50 to 72 inches (127-183 cm). Commonly considered a prairie species, it may also be found in open areas along the border of the Ozarks. Bullsnares take shelter in large clumps of grass or mammal burrows. This large snake may hiss loudly and vibrate its tail when alarmed. Food includes small mammals—especially rodents—as well as birds and birds' eggs. This species is extremely valuable in controlling destructive rodents. Bullsnares kill their prey by constriction.

Missouri Distribution: Statewide except for the southeastern third of the state.

EASTERN YELLOWBELLY RACER

Coluber constrictor flaviventris
Local Name: blue racer

Color of this common snake is variable—from olive, tan, brown or blue to nearly black. The belly may be yellow, cream or light blue-gray. Young racers are clearly marked with brown blotches and spots (see inset), but these markings fade and eventually disappear as the young snakes grow. Length averages from 30 to 50 inches (76-127 cm). Racers prefer bushy fields, grasslands and open woods. This species is active by day and will take shelter under rocks, brush or in animal burrows if pursued. As the name implies, racers can move fast, especially through tall grass or brush. As with many of our harmless snakes, a racer sometimes will vibrate its tail when alarmed. Food includes frogs, lizards, snakes, small rodents and birds.

Missouri Distribution: Statewide, replaced by the southern black racer—a subspecies—in the southeastern corner.

FLATHEAD SNAKE

Tantilla gracilis

This is Missouri's smallest snake. General color is tan, gray-brown or reddish-brown. The head sometimes is slightly darker than the rest of the body or is black, and the belly is salmon pink. Length averages from 7 to 8 inches (18-20 cm). It is most likely to be under rocks where there is slightly moist soil, and south-facing, rocky, wooded hillsides are its preferred habitat. The flathead snake feeds on centipedes and insect larvae.

Missouri Distribution: Southern half of the state except for the southeastern corner.



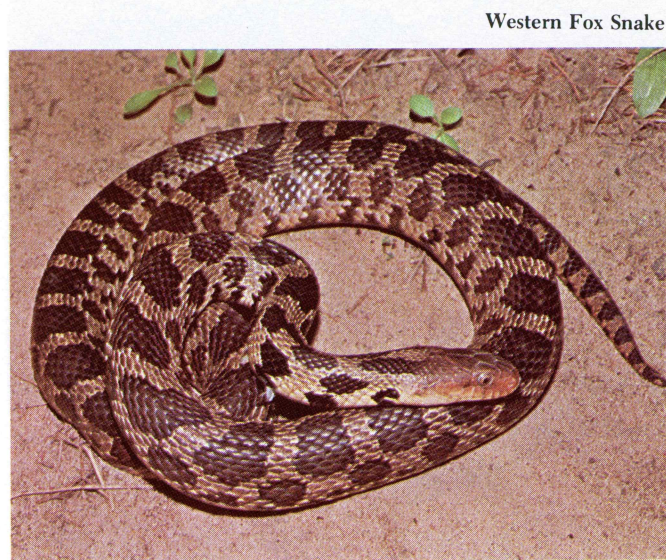
Flathead Snake

WESTERN FOX SNAKE

Elaphe vulpina vulpina

This is a marsh-dwelling member of the rat snake group. General color is yellowish, greenish-brown or tan, with large brown blotches on the back and smaller ones on the sides. The head of fox snakes may show some orange color, which might cause them to be misidentified as a copperhead. Belly color is normally yellow, marked with a distinct black, checkered pattern. Length averages from 36 to 54 inches (91-137 cm). This species is believed to be an inhabitant of open grasslands and the borders of woods. In Missouri, the fox snake has been found near large, natural marshes, but it is not a common snake. Food includes small rodents and birds. Fox snakes kill their prey by constriction, vibrate their tail when alarmed and will bite to defend themselves.

Missouri Distribution: Northern third of the state.



Western Fox Snake

BLACK RAT SNAKE

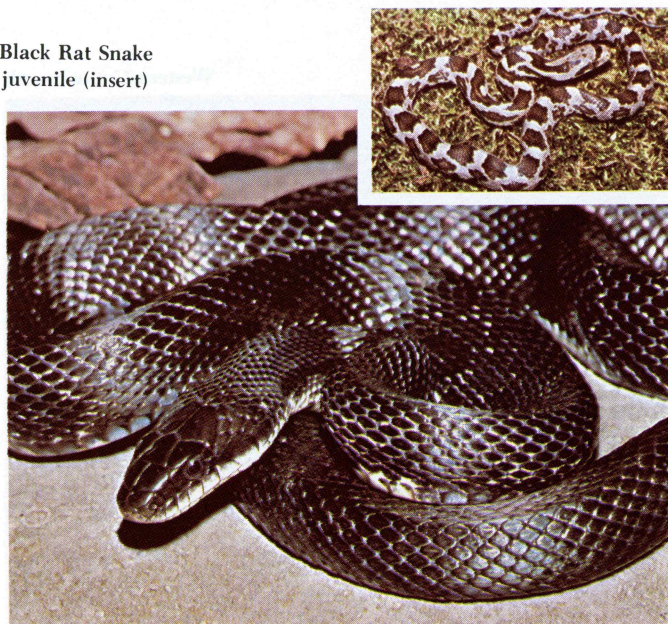
Elaphe obsoleta obsoleta

Local Name: black snake

This is one of our largest common snakes. It is generally shiny black, but some individuals show dark brown blotches. Skin between the scales along the sides may be red. The belly is mottled with gray or may be checkered with black. Length averages from 42 to 72 inches (107-183 cm). Black rat snakes live in a wide variety of habitats: rocky, wooded hillsides, wooded areas along rivers, in or near farm buildings. This species is well-known for its ability to climb trees. Black rat snakes eat rodents, birds and birds' eggs. They kill their prey by constriction. Farmers are well aware of the value of black rat snakes in controlling destructive rodents. A black rat snake will bite to defend itself, but the bite is harmless. It may vibrate its tail when alarmed. Young of this species are light gray with dark brown or black markings (see insert), but after a year or two of growth, the color normally will change to a more uniform black.

Missouri Distribution: Statewide, but shows some indication of being replaced by the gray rat snake—a subspecies—in the southeastern corner.

Black Rat Snake
juvenile (insert)



MISSOURI'S

VENOMOUS SNAKES



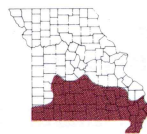
Osage Copperhead



OSAGE COPPERHEAD
Agkistrodon contortrix phaeogaster

This is our most common venomous snake. Color varies from grayish-brown to pinkish-tan, with hourglass-shaped crossbands of dark gray, brown or reddish-brown. The head may have some pink or orange color, hence the name "copperhead." The tail may be yellow or greenish-yellow, especially in young specimens, and the belly usually is a dusky mixture of gray, tan and black. Length averages from 24 to 36 inches (61-91 cm). Copperheads make their homes on rocky hillsides and along the edges of forests. They also spend time among trees and in brush along prairie streams. Copperheads are often found near abandoned farm buildings. Copperheads will vibrate their tail when alarmed. There is no record of a human death caused by a copperhead bite in this state, but medical treatment for such bites is necessary. Copperheads eat mice, lizards, frogs and sometimes small snakes.

Missouri Distribution: The Osage copperhead is found over the northern two-thirds of the state and is replaced by the southern copperhead—a subspecies—in the southern third of the state.



WESTERN COTTONMOUTH
Agkistrodon piscivorus leucostoma
Local Name: water moccasin

Western Cottonmouth



The name "cottonmouth" is derived from the white-colored lining of this snake's mouth. When alarmed, it opens its mouth widely, showing the cotton-white lining. General body color is black with little or no pattern, or dark brown with darker crossbands on the back. The belly is dark brown or black. Length averages from 30 to 42 inches (76-107 cm). Young cottonmouths are superficially patterned like a copperhead and usually have a yellowish-green tail. This species lives in two distinctly different habitats; in southeastern Missouri, they live in swamps and oxbow lakes, and in the southern Ozarks, they live in rocky streams and river sloughs. The cottonmouth is a dangerously venomous species that can deliver a fatal bite. It is semi-aquatic, primarily a fish-eater but also eats frogs, other snakes, lizards and rodents. Various harmless snakes often are misidentified as cottonmouths and needlessly killed.

Missouri Distribution: Southeastern corner and a spotty distribution throughout the Ozark region.

EASTERN MASSASAUGA RATTLESNAKE

Sistrurus catenatus catenatus

Local Name: swamp rattler



This snake is gray to dark gray with numerous brown or gray-brown blotches. The belly is dark gray or black, and there is usually a dark brown band extending backward from the eye onto the side of the neck. The end of the tail has a small rattle. Length averages from 20 to 30 inches (51-76 cm). This snake lives in marshy areas or wet prairies and may take shelter in burrows of crayfish or other animals. Massasaugas have become rare in Missouri because of habitat destruction and are on the state's Rare and Endangered Species list. Human deaths caused by its bite are rare, but tests show that the massasauga's venom is highly toxic, so it must be respected and classified as dangerous. Massasaugas eat mice, shrews, frogs and lizards.

Missouri Distribution: This species is found in the northeastern quarter of the state and gradually intergrades with the light-colored western massasauga rattlesnake—a subspecies—in the northwestern corner.



Massasauga Rattlesnake

WESTERN PYGMY RATTLESNAKE

Sistrurus miliarius streckeri

Local Name: ground rattler



This is one of the smallest species of rattlesnakes in North America. General color is light grayish-brown, with row of small, dark brown spots on the back and similar spots on each side. Most specimens also have a rust-colored stripe down the back. The belly is usually gray. The pygmy rattlesnake has a thin tail and a tiny rattle. Length averages from 15 to 20 inches (38-51 cm). This species lives under rocks on cedar glades and is so secretive that few people encounter it. The sound of the vibrating rattle is a faint buzz like the sound of a grasshopper. Food includes small lizards, snakes, frogs and mice. Although the bite of this species is not fatal, a bite victim should seek immediate medical attention. The pygmy should be respected and left alone.

Missouri Distribution: Counties bordering Arkansas and the eastern Missouri Ozarks.



Western Pygmy Rattlesnake

TIMBER RATTLESNAKE

Crotalus horridus



This is Missouri's largest venomous snake. Generally tan or yellowish-tan, the timber rattlesnake has markings along the back which are dark brown and change from blotches on the neck to bands near the tail. Often, a dark line extends from the eye along the angle of the jaw, and there is a rust-colored stripe down the back. It has a large rattle at the end of its tail. Length averages from 36 to 54 inches (91-137 cm). This rattlesnake lives on rocky, wooded hillsides. In the northern half of Missouri, it tends to congregate in selected south-facing rocky areas where it over-winters. This habit is not widespread in southern Missouri. Timber rattlesnakes eat a variety of rodents and also small rabbits. It is dangerously venomous, but there are few cases of rattlesnake bites in this state.

Missouri Distribution: Statewide.



Timber Rattlesnake

VENOMOUS SNAKES

It is important for those who spend time in Missouri's outdoors to learn to identify venomous snakes. Use these photos, descriptions and maps to familiarize yourself with the size, color and distribution of these snakes. Several species of harmless snakes (hognose, garter and water snakes) spread their head and neck when alarmed, which may cause the head to appear triangle-shaped. Consequently, this characteristic is not reliable for distinguishing venomous snakes from harmless ones.

All of Missouri's venomous snakes are pit vipers, which means they have an opening on each side of the head, called a *sensory pit*. A pair of hollow fangs are located on the front of the upper jaw. In daylight these snakes have eyes with vertical pupils—like a cat—while all harmless snakes have round pupils. This characteristic is *not* reliable for identification at night. Even the underside of the tail is helpful in distinguishing the two types of snakes: our venomous species have a single row of scales, while harmless snakes have two rows of scales.

FACTS ON SNAKEBITES

Few people in Missouri suffer venomous snakebites, despite the fact that there are five venomous species and at least one of them—the copperhead—is commonly encountered. Most bites occur when persons are trying to kill or handle the snakes. About 8,000 persons are bitten by venomous snakes each year in the United States. Perhaps a dozen die, which amounts to a fraction of one percent. By comparison, about 120 people die annually from bee stings and 150 die when struck by lightning.

Encounters with venomous snakes can be prevented if you follow these simple rules:

- (1) Stay away from areas where there may be a concentration of venomous snakes, such as swamps, marshes and bluffs.
- (2) Wear protective footwear in areas where there are likely to be snakes. Thick leather or rubber boots or hightop hiking shoes will protect feet, ankles and lower legs.
- (3) Never place your hands under rocks or logs; do not step over rocks or logs. Step on them first, then over.
- (4) Step lively when hiking. Look the ground over, particularly around large rocks or logs, when you stop to stand or sit.
- (5) Wear rubber boots when fishing in streams that may harbor the venomous cottonmouth. If a cottonmouth falls in your canoe or boat, don't panic—get to shore and flip the snake out with a paddle, net or fishing rod. Trying to kill the snake in the boat may cause the snake to bite you or cause you to fall into the water.
- (6) Avoid any snake you cannot identify.

**IN THE EVENT OF A VENOMOUS SNAKEBITE,
SEEK MEDICAL ATTENTION IMMEDIATELY!**

For current information on snakebite first-aid, contact your nearest American Red Cross office.

CONSERVING MISSOURI'S WILDLIFE

Snakes are not popular creatures in our culture. Just the mention of them evokes the image of evil for most people. But even these animals are having a difficult time surviving, not only because of persecution but also, in large part, because of habitat destruction (deforestation, pollution, urbanization). As with many animals whose numbers are declining, most problems associated with the plight of our native snakes result from a lack of understanding. People traditionally have been brought up to fear and hate snakes; consequently, snakes have not fared well in their relations with man.

The Missouri Department of Conservation has long been viewed as a leader in wildlife conservation. Since passage of the Design for Conservation, the Department has conducted special studies and programs to gather information and to alert Missourians to the status, value and needs of all our wild animals and interesting native plants. It is our hope that Design for Conservation programs will result in an increased appreciation for all wildlife and a better understanding of each species' role in nature.



Bullsnake eating a mouse

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